

ABSTRACT OF THE DISCLOSURE

To provide a method of and an apparatus for continuously measuring elemental mercury and bivalent mercury both contained in a gaseous medium fractionally with a simplified structure, the concentration of a total mercury (Metallic Mercury + Bivalent Mercury) and the concentration of elemental mercury contained in gases are measured continuously and fractionally. In the practice of this mercury measuring method, a first column 1, filled with a first fixed catalyst, and a second column 11, filled with a second fixed catalyst, are fluid connected in parallel relation to each other. The gases G are introduced into those first and second columns 1 and 11. In the first column 1, the first fixed catalyst collects and removes the bivalent mercury, but passes only the elemental mercury in the gases through the first column. In the second column 11, the second fixed catalyst reduces the bivalent mercury into elemental mercury and passes through the second column 11 the elemental mercury in the gases containing the elemental mercury into which the bivalent mercury has been reduced. The concentration of the elemental mercury in the gases, from which the bivalent mercury has been removed after passage thereof through the first column 1 and, also, the concentration of the elemental mercury in the gases into which the bivalent mercury has been reduced after passage thereof through the second column 11 are measured as the concentration of the elemental mercury contained in sampled gases and as the concentration of the total mercury in the sampled gases, respectively by utilization of first and second mercury measuring instruments.